Answers of lesson 6-6 Alg2

Q39

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| |  | | --- | | **Simplify each expression.** | |  |
| **http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=58%3a%08%03%09X%0C%0C%05Cf%7DS** | |  | | --- | |  | |  |

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|  | **SOLUTION:** |
|  | |  | | --- | | **http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=70%3ay%14%0B%09J%40eDp%5D%11** | |

Q66

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| |  | | --- | | **REASONING** Determine whether http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=28%3aX%04m%15%1C%0B%06%03U%04M is *always, sometimes,* or *never* true. Explain your reasoning. | |  |

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|  | **SOLUTION:** |
|  | |  | | --- | | The statement is never true.  The quantities are not the same. When the negative is enclosed inside of the parentheses and the base is raised to an even power, the answer is positive. When the negative is not enclosed inside of the parentheses and the base is raised to an even power, the answer is negative. | |

Q67

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| |  | | --- | | **CHALLENGE** Considerhttp://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=60%3a%1DP%0C%0C%0AJe%7DQ%5Fg.    **a.** Explain why the expression is not a real number.    **b.** Find *n* such that http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=60%3a%1DP%0C%0C%0AJe%7DQ%5Ff is a real number. | |  |

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|  | **SOLUTION:** |
|  | |  | | --- | | a. Sample answer:http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=60%3a%1DP%0C%0C%0AJe%7DQ%5Em    There is no real number that when raised to the forth power results in a negative number.    b. Sample answer:http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=60%3a%1DP%0C%0C%0AJe%7DQ%5El  This is much like multiplying http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=39%3A%2500E%2509%2514Ldt%251A%251D%2501%2507. The product rule of radicals is only defined for real numbers, so you must first rewrite each square root before multiplying as follows: http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=55%3AO%255D%257C%251C%250B%2507P%2503%250D%2501E. Then you can multiply the square roots and complex numbers separately. This will result in the product http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=43%3AXb%257C%2515%251C%2505%2501D%255D%255E%2504or –6. From two complex numbers we obtained a product that is a real number. In a similar manner multiplying http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=8%3A%251F%2501IkVA%2500R%2504J%2517by http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=6%3AB%2514%250B%2509Ie%255E%2540%2506%255D%2502actually produces multiple products of which two are real number products 8 and –8 and the other two are complex products 8***i*** and –8***i***. This multiplication will be explained in a future course. | |

Q70

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|  | |  | | --- | | **CCSS CRITIQUE**Ayana and Kenji are simplifyinghttp://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=3%3aC%02KV%1C%0B%06%40f%5FD  . Is either of them correct? Explain your reasoning.    http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=3%3aC%02KV%1C%0B%06%40f%5FG  http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=3%3aC%02KV%1C%0B%06%40f%5FF | |  |

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|  | **SOLUTION:** |
|  | |  | | --- | | No.  Ayana added the exponents and Kenji divided the exponents. The exponents should have been subtracted. | |

Q71

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| |  | | --- | | The expressionhttp://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=36%3aL%04%40%14M%09%1BE%60%7C%15is equivalent to a positive integer when *c* is equal to    **A** 8    **B** –8    **C** 56    **D** 36 | |  |

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|  | **SOLUTION:** |
|  | |  | | --- | | When *c* = –8, the radicand http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=36%3aL%04%40%14M%09%1BE%60%7C%14 becomes a perfect square.    Therefore, option B is the correct answer. | |

Q73

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| |  | | --- | | **GEOMETRY** What is the converse of the statement? *If it is summer, then it is hot outside*.    **A** If it is not hot outside*,* then it is not summer.    **B** If it is not summer*,* then it is not hot outside.    **C** If it is hot outside*,* then it is summer.    **D** If it is hot outside*,* it is not summer. | |  |

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|  | **SOLUTION:** |
|  | |  | | --- | | The converse is produced by interchanging the hypothesis and the conclusion.    Option C is the correct answer. | |

Q74

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| |  | | --- | | **SHORT RESPONSE** If http://esolutions.mcgraw-hill.com/GetCogneroMedia.ashx?id=18%3a%08%03%09X%1C%0B%06B%03%5BA*,*then find *p*. | |  |

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|  | **SOLUTION:** |
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